

IN THE CLAIMS

Please amend the claims as follows:

Claims 1-22 (Canceled).

Claim 23 (New): A device for measuring exposure to radiations comprising:
at least one component for detecting photons or particles, associated with at least one circuit for acquiring and counting detection events, the acquisition circuit including a signal processing circuit delivering count pulses corresponding to detection events, means for continuous resetting, and means for discontinuously resetting the pulse signal processing circuit.

Claim 24 (New): The device according to claim 23, wherein a response curve of a number of counted events versus a number of photons or particles sensed, by each detection component, is a monotonous increasing curve.

Claim 25 (New): The device according to claim 24, wherein the response curve has a first response range that increases substantially linearly, the number of counted events increasing proportionally to the number of sensed photons or particles, followed by a second response range that is simply increasing, the number of counted events continuing to increase or remaining stable as long as the number of sensed photons or particles increases.

Claim 26 (New): The device according to claim 23, further comprising a detection element including a plurality of elementary detectors respectively associated with a plurality of circuits for acquiring and counting events forming an electronic processing entity arranged according to a matrix layout.

Claim 27 (New): The device according to claim 23, wherein said continuous resetting means triggers a resetting current in a charge accumulation stage of the acquisition circuit.

Claim 28 (New): The device according to claim 23, wherein said means for discontinuously resetting the pulse signal processing circuit triggers after each detection event, rapidly or after a charge-to-pulse conversion phase, return to an idle operating point of an amplification stage of the acquisition circuit.

Claim 29 (New): The device according to claim 23, wherein said continuous resetting means triggers capacitive means of a charge accumulation stage in response to each detected event.

Claim 30 (New): The device according to claim 29, further comprising means for shortening discharge of the capacitive means.

Claim 31 (New): The device according to claim 23, further comprising means for generating two discharge current values in a charge conversion stage.

Claim 32 (New): The device according to claim 23, further comprising means for switching a discharge current value in a charge accumulation amplifier stage.

Claim 33 (New): The device according to claim 27, wherein a discharge current of the charge accumulation stage assumes a first value during the idle times and a second value when detecting an event, the second value being larger than the first value.

Claim 34 (New): The device according to claim 23, wherein a charge conversion stage includes a continuous discharge current source and a triggered or switched discharge current source.

Claim 35 (New): The device according to claim 23, further comprising switching means for short-circuiting capacitive means of a charge conversion stage.

Claim 36 (New): The device according to claim 23, wherein the acquisition circuit comprises a charge accumulation stage comprising a current source and a switch connected in parallel to input and output terminals of an amplifier and/or a capacitance.

Claim 37 (New): The device according to claim 33, wherein the first value of the discharge current of the charge accumulation stage during the idle time is adjusted to a value of an order of parasitic, leakage, or darkness current of the detector component.

Claim 38 (New): The device according to claim 23, wherein the acquisition and counting circuit comprises a feedback or counter-reaction loop between a point downstream from a charge accumulation stage and said stage.

Claim 39 (New): The device according to claim 38, wherein the continuous resetting means are applied to said accumulation stage.

Claim 40 (New): The device according to claim 38, wherein the feedback loop retransmits signals of count pulses.

Claim 41 (New): The device according to claim 38, wherein the feedback loop transmits a signal from a threshold comparator stage.

Claim 42 (New): The device according to claim 38, wherein the feedback loop controls switching means connected to terminals of the charge accumulation stage.

Claim 43 (New): The device according to claim 18, wherein the feedback loop controls a discharge current source.

Claim 44 (New): The device according to claim 23, further comprising means for increasing rise amplitude of a pulse signal emitted during each detection event associated with means for reducing fall time of said signal.